REMARKS/ARGUMENTS

This Amendment is submitted in response to the Final Office action mailed on April 24, 2003. Claims 40-43 are added. Claims 1-43 are pending in the application.

In a telephone interview with the Examiner on August 20, 2003, the Examiner and Applicant's representative Patrick Ikehara discussed the rejections of the claims. Applicant's Representative thanks the Examiner for his time and courtesy on this matter. Discussion of the claims were limited to a few claims to expedite the interview and prosecution of the application. In particular, claims 8, 26, 32, 37 and 38 were discussed in order to receive clarification of the Examiner's rejections of these claims. The Examiner indicated that these claims may include allowable subject matter. The Examiner also indicated that claim 38 in particular appeared to be allowable.

A final Office action was mailed April 24, 2003. The final Office action allowed claims 12, 13, 25 and 27 and rejected the remaining claims, including an objection to claim 12 and § 112 rejections of claims 1-11, 14-24, 26 and 28-39 based on the term "intranet".

Applicants submitted an amendment on June 24, 2003. The amendment was not entered. The Advisory action states that "the objection to claim 12 and the 112 1st paragraph rejection have been lifted…" Accordingly, the § 103 rejections remain at issue.

The added claims will be addressed first.

New Claims

New claims 40-42 are dependent claims from independent claims 1, 28 and 34 respectively. New claims 40-42 are somewhat similar in that they further specify intrusively measure or measuring network traffic. As dependent claims 40-42 depend on independent claims relating to non-intrusive measuring, the dependent claims include requirements for both intrusive and non-intrusive measuring.

A previously existing claim, claim 31, includes a similar limitation, and claim 31 was rejected under 35 U.S.C. § 103 in view of de la Salle and Dobbins. As stated in the final Office action at page 7, "Dobbins teaches: a probe packet used on a connection establishment determination network arrangement." Dobbins mentions at column 16, lines 29-33 an address resolution packet, which Dobbins also calls a "probe". The probe is used to cause generation of a routing scheme between two nodes on a network. Thus, it appears that Dobbins teaches the use of a packet to preconfigure a network connection.

The use of a packet to preconfigure a network is not intrusive monitoring. In addition, the Office action states, again at page 7, that "it would have been obvious… to have combined the use of probe packets when a network is an effective means to track packets on a network." However, in Dobbins, the probe packet is not measuring the results of the probe packet to provide metrics. Instead, the probe packet is used to cause network configuration.

Combining de la Salle and Dobbins does not provide both non-intrusive and intrusive monitoring, and combining what is

fairly taught by de la Salle and Dobbins does not provide for both intrusive and non-intrusive monitoring.

Accordingly, claims 40-42 are allowable in view of de la Salle and Dobbins. In addition, claim 31, and dependent claims 32 and 33 are also allowable.

New claim 43 is a dependent claim in which non-intrusive metrics servers provide each other information. New claim 43 has some similarity to claims 23-24, 26, and 33. These claims were rejected in view of de la Salle, Dobbins and further in view of Bhaskaran. The Office action, at page 9, states that Bhaskaran teaches "a conventional network with two servers (Figure 1) with network going between the two servers on an IP network (col. 1, lines 15-24)." A review of Bhaskaran, however, indicates that although two servers may be on the network, the servers of Bhaskaran are not sharing information. In particular, the servers of Bhaskaran are not sharing metrics information. Thus, combinations of de la Salle, Dobbins and Bhaskaran do not teach or suggest the sharing of performance metrics between two metrics servers as specified by claim 43.

Moreover, the rejection of claim 26 states "it is well known in the art…that a second server will communicate with a primary server periodically to gather whatever predefined metrics are administered currently by the primary server." The rejection is improper, there is no reference to what was well known at the time of the invention. In addition, Applicants have previously requested that evidence of same be provided or the rejection withdrawn. That request is reiterated here.

Turning now to the pending independent claims, Applicants incorporate by reference the remarks of the amendment mailed June 24, 2003 In particular, Applicants incorporate by reference the prior objections to unsupported rejections based on what is generally known, and require documentation of same.

On page 5 of the Action, claims 1-8, 14-19, 28-32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,144,961 issued to de la Salle in view of U.S. Patent no. 5,485,455 issued to Dobbins et al. ("Dobbins"). This rejection is respectfully traversed.

Independent Claims 1, 14, 17, 28, 34

Claim 1 recites a network interface device configured to non-intrusively measure network traffic transferred in and out of an intranet for at least one connection. Claim 14 also recites that a metrics generator is configured to non-intrusively measure network traffic being transferred in and out of the at least one server inside the intranet and to generate performance metrics from the network traffic measured. Claim 17 recites that a first metrics server inside the intranet is configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured. Claim 28 recites non-intrusively measuring network traffic between at least one server in an intranet and at least one client outside the intranet. Claim 34 also recites, non-intrusively measuring network traffic for at least one connection, the at least one connection being a logical path

between at least one server inside an intranet and at least one client outside the intranet.

The Action on page 2 suggests that de la Salle describes a separate intranet for a server communicating to clients external to that intranet (FIG. 1). However, de la Salle, at most, describes, in col. 6, lines 6-11, in reference to FIG. 1, that a computer network 12 is shown to be an overall array which includes a number of discretely identifiable branch arrays, referred to for simplicity as LAN 14, although it is recognized that each of the branches may not fit the classic definition of a local area network, since each does not include a server component."

On pages 2-3 of the Action, definitions of the intranet are provided. For example, on page 3 of the Action, the cited definition describes that an intranet is a "limited, access network of linked computers that uses a common Internet-based protocol to exchange data". None of the references appear to be an authoritative reference or explicitly indicate that an intranet must follow the provided definition or preclude that more, or other, components or features describe an intranet. The scope and context of the definitions are also not clear.

The specification, on page 4, line 32 to page 5, line 20, describes that the intranet is a LAN or WAN specifically configured for a specific business structure organization such as a corporation and that the complexity of managing an intranet is often reduced due to limited authorized access and common administrative protocols. In view of the specification and the definitions provided in the Action on pages 2-3, the intranet is

at least different from or something more than merely just a group of computers networked together.

As such, de la Salle does not describe or suggest an intranet. Thus, de la Salle also does not describe or suggest measuring network traffic transferred in and out of the intranet or in and out of a server or metrics server in the intranet, or measuring network traffic between a server inside the intranet and a client outside the intranet, as recited in claims 1, 14, 17, 28 and 34.

Dobbins also describes, in col. 13, lines 41-60 in reference to FIG. 4, an "illustration of a networking chassis adapted to incorporate the SFPS technology. As shown, the chassis 30 is a mechanical enclosure 31 which is used to house a plurality of networking modules 32, which may include repeater modules, bridge modules, router modules, terminal servers, file servers, etc. The chassis or hub in a mostly connection of diverse LAN segments, including internet, token ring and FDDI segments, as well as to wide area networks (WANS)." As such, as noted in reference to de la Salle, Dobbins also does not describe or suggest an intranet and thus does not describe or suggest measuring network traffic transferred in and out of the intranet or in and out of a server or metrics server in the intranet, or measuring network traffic between a server inside the intranet and a client outside the intranet, as recited in claims 1, 14, 17, 28 and 34. Accordingly, claims 1, 14, 17, 28 and 34 are believed to be patentable.

Therefore, since claims 2-8 depend from claim 1 and contain additional limitations that are patentably distinguishable over

the references of record, claims 2-8 are also believed to be patentable. Also, since claims 15-16 depend from claim 14 and contain additional limitations that are patentably distinguishable over the references of record, claims 15-16 are also believed to be patentable. Furthermore, since claims 18-19 depend from claim 17 and contain additional limitations that are patentably distinguishable over the references of record, claims 18-19 are believed to be patentable. Moreover, since claims 29-32 depend from claim 28 and contain additional limitations that are patentably distinguishable over the references of record, claims 29-32 are believed to be patentable. Also, since claims 35-36 depend from claim 34 and contain additional limitations that are patentably distinguishable over the references of record, claims 35-36 are believed to be patentable.

Claim 8

Claim 8, as amended, recites that an active connection table contains entries for a connection that is active during a predetermined measurement time interval and an entry is deleted from memory when the at least one connection for the entry is inactive when the predetermined measurement time interval expires.

The Action, on page 6, indicates that "de la Salle teaches server 32 acting as a router for calculating hop counts, the Examiner takes official notice that the most basic needs of a router are memory for routing table storage and data forwarding and a network interface." However, de la Salle does not describe or suggest an active connection table with entries for

connections that are active during a measurement time interval and thus de la Salle does not teach or suggest an active connection table being stored in memory. De la Salle also does not describe or suggest that an entry is deleted from memory when the at least one connection for the entry is inactive when the predetermined measurement time interval expires. Accordingly, even if there is a motivation to combine the references, claim 3 is believed to be patentable.

Claim 31 recites that network traffic is intrusively measured between a server and a client in an intranet. Claim 32 also recites that the intrusive measurement of network traffic includes injecting and monitoring probing packets that are transferred between the at least one server and the at least one client outside the intranet. Claim 36 also recites intrusively measuring network traffic for the at least one connection.

Claim 32

Additionally, regarding claim 32, the Action on page 7 indicates that "de la Salle teaches: a probe computer that probes the network (FIG. 2) but fails to teach of intrusive or probing packets being added to the regular flow of data in a respective network. Dobbins teaches: a probe packet used on a connection establishment determination network arrangement. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the use of probe packets on a network as an effective means to track packets on a network."

However, Dobbins at most describes, in col. 16, lines 30-35, that "if the broadcast frame was a probe or address resolution packet (i.e., an implied connect request), the call processor will return a probe reply as a "proxy" which gives the destination end system MAC addresses. Subsequently, the source end system can then send packets directly to the destination based on its MAC address." Thus, Dobbins describes a probe packet to receive a return probe reply to give the destination end system and not monitoring and injecting probing packets for intrusively measuring network traffic. Accordingly, even if there is a motivation to combine the references, Dobbins and/or de la Salle do not describe or suggest monitoring and injecting probing packets for intrusively measuring network traffic.

Furthermore, there is no motivation to combine de la Salle and Dobbins to arrive at the Applicants' invention as recited in claims 31-32 and 36. In fact, de la Salle describes in col. 4, lines 61-63 that "an advantage of the present invention is that it can act in a "passive" mode, without sending out frequent query messages which only add traffic onto a network" and in the Abstract, a "system (10) is used to measure a transaction response time of a transaction on a distributed application in a way which is non-intrusive to the application by examining data packets for the presence or absence of session layer data." Thus, neither de la Salle or Dobbins provide a motivation to combine with the other to provide a method comprising non-intrusive and intrusive measuring of network traffic as provided in claims 31-32 and 36. Accordingly, claims 31-32 and 36 are believed to be patentable.

Also, on page 7 of the Action, claims 9-11 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Salle in view of Dobbins in further view of U.S. Patent No. 5,375,070 issued to Hershey et al. ("Hershey"). This rejection is respectfully traversed.

Hershey does describe, in col. 5, lines 19-25 and in FIG. 1A, that a "router 115 uses a routing table contained therein to establish a logical and/or physical connection between one of the senders A1, A2 or A3 and one of the destinations B1, B2 or B3. The routing table shown in FIG. 1A illustrates that the source A1 is connection to the destination B1 over the path P2 which is the FDDI network 126." Hershey further describes, in col. 5, lines 53-57, that the "router 115, in response, will revise its routing table so as to connect the sender A2 to the destination B2 over a different network providing a more optimal communication than that currently provided by the token ring LAN 124." However, Hershey does not describe or suggest updating the table based on measured network traffic and the predetermined measurement time interval or a processor configured to do the updating, as recited in claim 9. Accordingly, even if there is any motivation to combine de la Salle, Dobbins and Hershey, the references combined do not arrive at the invention as claimed in claim 9 and thus claims 9 is believed to be patentable.

Claim 11 recites that the generation of performance metrics includes the determination of source and destination Internet Protocol addresses and timestamp information of the packets captured within the predetermined measurement time interval.

The Action on page 7 indicate that "Hershey teaches: a network with a time stamp as a means for tracing data for a time dependent network (col. 1, lines 40-46) and a data processor 105 coupled to memory 100 and a table for storage of source and destination information." Hershey does describe, in col. 1, lines 40-46, that the "term "trace" refers to a record of all frames and bytes transmitted on a network, as well as environmental information. Two examples of environmental information include time stamps and control block information. A trace usually provides a complete picture of time dependent network behavior." Thus, although Hershey does describe environmental information including time stamps, Hershey does not describe or suggest how the time stamps are determined and more specifically that performance metrics with time stamp information of packets captured within a predetermined measurement time interval are generated, as recited in claim 11. Accordingly, even if there is any motivation to combine de la Salle, Dobbins and Hershey, the references combined do not arrive at the invention as claimed in claim 11 and thus claims 11 is believed to be patentable.

Claim 37

Claim 37, as amended, recites examining packets being transferred during a plurality of connections, such that each connection is a logical path between a server in the intranet and a client outside the intranet. As noted previously, de la Salle, Dobbins and Hershey do not describe or suggest an intranet and thus also do not describe or suggest the server in

an intranet and a client outside the intranet or a logical path between a server in the intranet and a client outside the intranet and thus neither of the references describe or suggest examining packets transferred during the connection between the server in the intranet and a client outside the intranet.

Claim 37 also recites that performance metrics are generated from the examined packets for the connections upon the expiration of a predetermined measurement time interval and deleting each created record corresponding to each connection of the plurality of connections that becomes inactive when the predetermined measurement time interval expires. The Action, on page 8, indicates that de la Salle fails to teach of any plurality of metrics being measured by a server and a processor coupled to a network interface or a record adding a deletion method dependent upon data metrics.

The Action further indicates on pages 8-9 that "Dobbins teaches: a network with a processor coupled to a network interface (FIG. 5) and metrics measured and calculated throughout the system to establish traffic routing assistance providing a better efficiency (col. 4, lines 20-40). Hershey teaches: a network routing system with a routing table interfaced with network interfaces of memory 100 and processing unit 105 (Figure 1A) updated periodically depending on the source or destination packets received therein. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined a processor and metrics calculation with a server and client type network using non-intrusive techniques with a dynamic record keeping unit to

further, increase efficiency and maintain accurate records of neighboring devices."

In col. 4, lines 20-40, Dobbins does describe that an "important aspect of the invention is a method of determining a path between two nodes (end systems) on the network which has the following properties: the path is optimal for one metric and passes a set of threshold tests for a number of other metrics; and, it must do so with a given time constraint." Hershey, in col. 5, lines 19-23, also describes that a "router 115 uses a routing table contained therein to establish a logical and/or physical connection between one of the senders, A1, A2 or A3 and one of the destinations B1, B2 or B3" and further describes in col. 5, lines 53-57, that the "router 115, in response, will revise its routing table so as to connect the sender A2 to the destination B2 over a different network providing a more optimal communication than that currently provided by the token ring LAN 124."

However, the references do not describe generating performance metrics from the examined packets for the connections upon the expiration of a predetermined measurement time interval. The references also do not teach or suggest deleting records corresponding to connections that become inactive beyond a measurement time interval. Accordingly, even if there is any motivation to combine de la Salle, Dobbins and Hershey, the references combined do not arrive at the invention as claimed in claim 37 and thus claim 37 is believed to be patentable.

Claim 38

Claim 38 also recites that upon the expiration of a predetermined measurement time interval performance metrics that were accumulated and generated are distributed. The action on pages 8-9 does not provide any reference to de la Salle, Dobbins and/or Hershey that the references describe distributing the performance metrics and in particular distributing the performance metrics upon the expiration of a predetermined measurement time interval as recited in claim 38.

However, the references do not describe or suggest distributing the performance metrics and in particular distributing the performance metrics upon the expiration of a predetermined measurement time interval as recited in claim 38. Accordingly, even if there is a motivation to combine the references, the reference combined do not arrive at the invention as recited in claim 38 and thus claim 38 is believed to be patentable.

Claim 39 recites continuing to examine packets and generate, accumulate and distribute performance metrics for a plurality of successive predetermined measurement time intervals. As noted above, in reference to claim 38, the action on pages 8-9 does not provide any reference to de la Salle, Dobbins and/or Hershey that the references describe continuing to examine packets and generate, accumulate and distribute performance metrics for a plurality of successive predetermined measurement time intervals and in particular continuing to distribute performance metrics for a plurality of successive predetermined measurement time intervals as recited in claim 39.

Also, the references do not describe or suggest continuing to generate, accumulate and distribute performance metrics for a plurality of successive measurement time intervals as recited in claim 39. Accordingly, even if there is a motivation to combine the references, the reference combined do not arrive at the invention as recited in claim 39 and thus claim 39 is believed to be patentable.

Also, since claims 38-39 depend from claim 37 (which is believed to be patentable) and contain additional limitations that are patentably distinguishable over the references of record, claims 38-39 are also believed to be patentable.

On page 9 of the Action, claims 20-24, 26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over de la Salle in view of Dobbins and further in view of U.S. Patent No. 5,963,540 issued to Bhaskaran. Applicants respectfully traverse this rejection.

Claim 20 recites a second metrics server that is configured to non-intrusively measured network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured. As noted previously in reference to claim 1, the references, de la Salle and Dobbins, do not teach or suggest an intranet and thus non-intrusively measuring network traffic in and out of the intranet and thus de la Salle and Dobbins do not describe or suggest the second metrics server non-intrusively measuring network traffic in and out of an intranet.

The Action also indicates on page 7 that Bhaskaran "teaches: conventional network with two servers (FIG. 1) with

network links between the two servers on an IP network (col. 1, lines 15-24). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the conventional network configuration of two servers with the above embodiment in order to establish a conventional topological configuration for providing added services for flexible enhancement purposes." However, Bhaskaran does not describe or suggest a second metrics server as claimed in claim 20. Accordingly, even if there is any motivation to combine de la Salle, Dobbins and Bhaskaran, the references combined do not arrive at the invention as claimed in claim 20 and thus claim 20 is believed to be patentable.

Claim 23 recites that a first metric server distributes performance metrics generated by the first metric server to the second metric server in the intranet. Claim 24 also recites that the second metric server distributes its performance metrics generated by the second metric server to the first metrics server in the intranet. Claim 33 also recites distributing performance metrics generated by the at least one server to another at least one server inside the intranet.

Bhaskaran describes, in col. 1, lines 15-24 and FIG. 1, a network with a first server connected to a router and a second server connected to the router. However, Bhaskaran does not describe or suggest communication between the two servers, much less distributing performance metrics as claimed in claims 23, 24, and 33.

Also, since claims 20-24 depend from independent claim 17, which as noted previously is believed to be patentable, and thus

claims 20-24 include all the features recited in claim 17, claims 20-24 are also believed to be patentable. Furthermore, since claim 33 depends from claim 28, which as noted previously is believed to be patentable, and thus claim 33 includes all the features recited in claim 28, claim 33 is also believed to be patentable.

Claim 26

Claim 26 also recites that performance metrics generated by the first and second metric servers are distributed on a predetermined periodic basis. The Action indicates on page 10 that de la Salle "teaches all the embodiments except a second server, while it was shown that it would have been obvious to combine a second server with a configuration taught by the applicant, it was not taught that the servers would periodically exchange metrics data, the Examiner takes official notice that it is well known in the art to a Microsoft certified systems engineer or related network training that a second server will communicate with a primary server periodically to gather whatever predefined metrics are administered currently by the primary server."

However, in the absence of specific evidence that distributing performance metrics generated by the first and second metrics server on a predetermined periodic basis would be obvious to a person of ordinary skill in the art, the rejection based on "general knowledge" or "common sense" is improper. *See In re Lee*, 61 U.S.P.Q. 2d 1430, 1435 (Fed. Cir. 2002) and MPEP 2144.03. Instead, the action must articulate, and place on the

record, any knowledge to which it refers. *Id.* Here, the Action also simply takes Official notice that it is well known that a second server will communicate with a primary server periodically to gather whatever predefined metrics are administered currently by the primary server. However, the Action fails to cite any objective evidence that such knowledge actually exists or is instant and unquestionable. Also, even with such knowledge, the Action does not describe why or how performance metrics generated by a first and second metric servers are distributed on a predetermined periodic basis that may burden a network or that such knowledge or features are instant and unquestionable.

Additionally, the Action fails to meet the obligation to show that distributing performance metrics generated by the first and second metrics server on a predetermined periodic basis would have been obvious to a person with ordinary skill in the art. *Id.* For these reasons, Applicants respectfully request withdrawal of the rejection or requests the reference that supports the Action's position and in particular the reference that describes distributing performance metrics generated by the first and second metrics server on a predetermined periodic basis as applied to claim 26.

On page 10 of the Action, the Applicants acknowledge with appreciation that claims 12-13, 25 and 27 are allowed.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of the application and allowance of claims 1-43. If the Examiner believes that a telephone conference with the Applicant's attorney might

expedite prosecution of the application, the Examiner is invited to call at the telephone number indicated below.

Respectfully submitted,

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